

Power Amplifier

1MHz-200MHz /45dB Gain/45dBm Psat

Model: TLPA1M200M-45-45

TLPA1M200M-45-45 is a power amplifier with small signal gain of 45 dB and Psat of 45 dBm across the frequency range of 1 to 200 MHz. The DC power requirement for the amplifier is +28 VDC/5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 1-200MHz
- Gain: 45dB Min
- Output Power Psat: 45dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1-200			MHz
Small Signal Gain	45	47		dB
Gain Flatness			±3	dB
Output P1dB	43			dBm
Output Psat	45			dBm
Input VSWR		1.5	2	:1
DC Voltage		28		V DC
DC Supply Current		5		A
Impedance	50			Ohms

Mechanical Specifications:

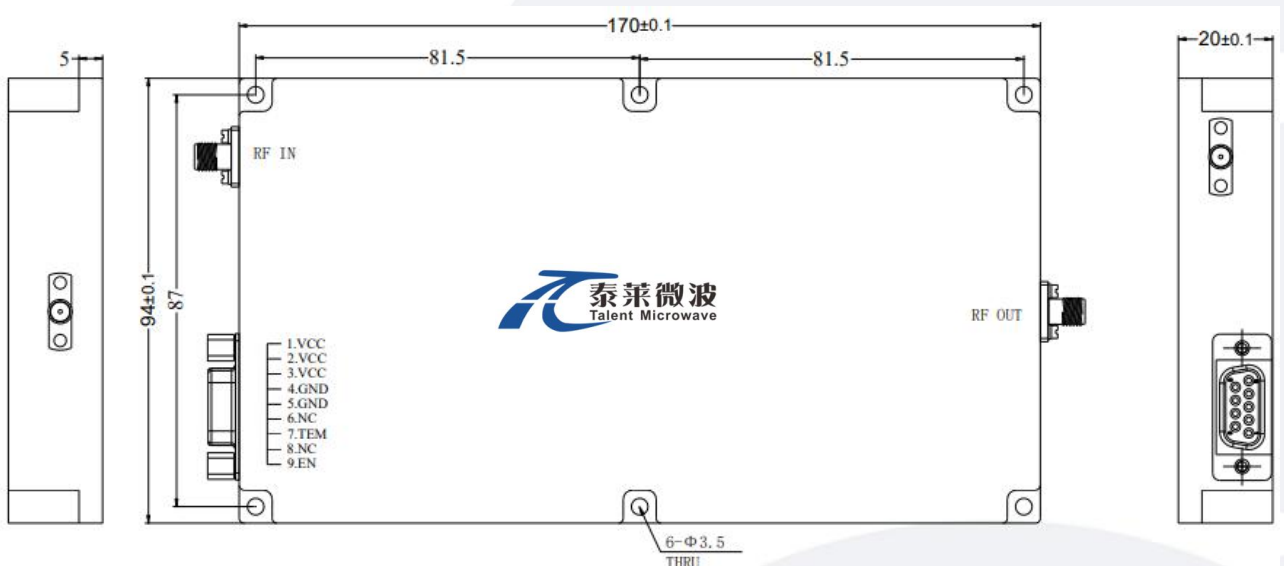
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	DSUB-9	
Size	170*94*20(Without Heatsink) 264*140*82(With Heatsink)	mm
Weight	3.7	Kg

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+5 dBm
ESD sensitivity (HBM)	Class 0, passed 150V

Outline Drawing:

Unit:mm



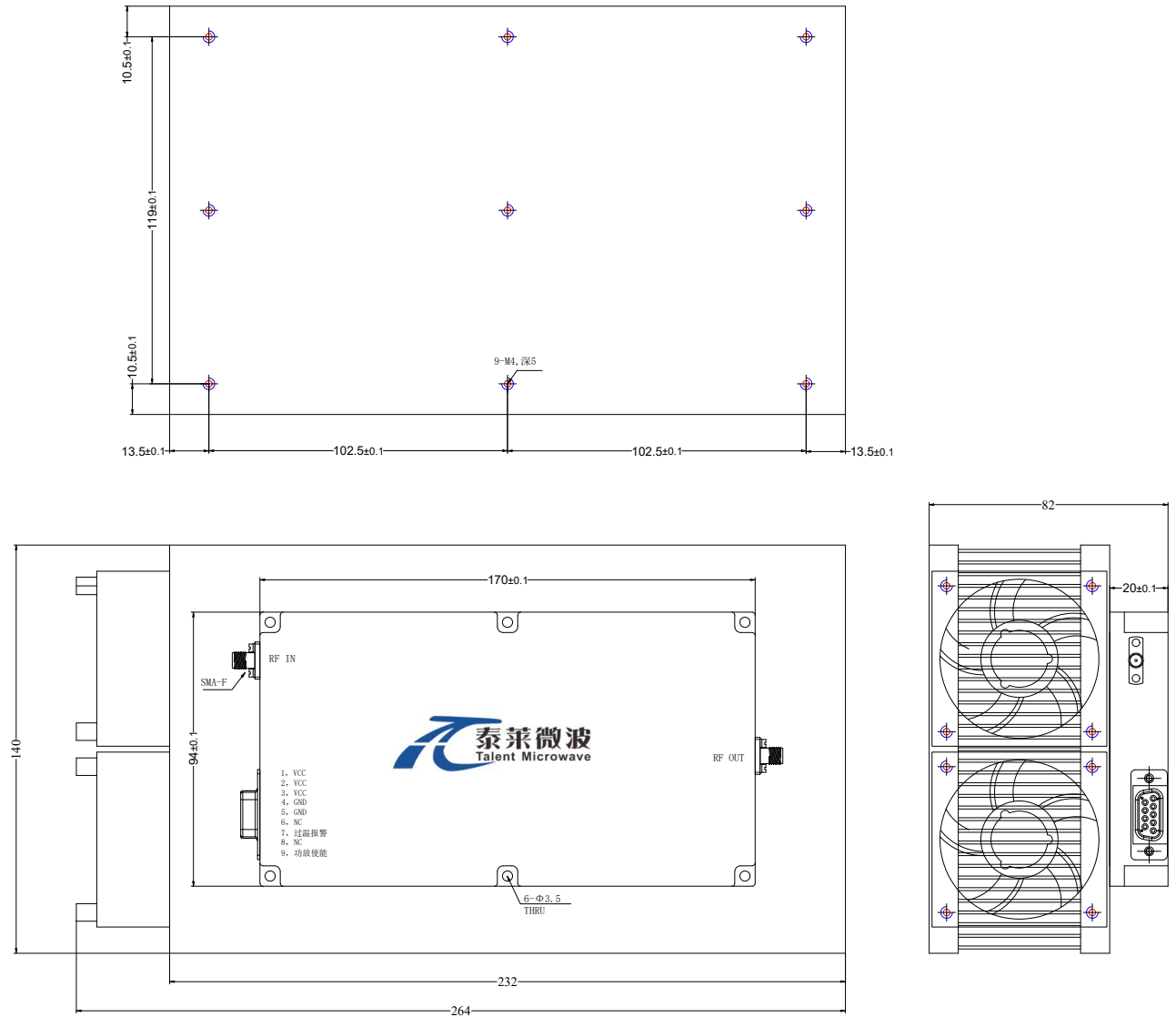
*****Heat Sink Required During Operation**



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Outline Drawing:

Unit:mm



Fans Supply Current: 0.3A@24~28V

DC Supply Connector (DSUB-9 Female):

Pin	Name	Function
1	+28V	+26.0-30.0VDC
2	+28V	+26.0-30.0VDC
3	+28V	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	NC	Not connected
7	Over TEM	When the temperature of the case exceeds 85 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
8	NC	Not connected
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+60	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

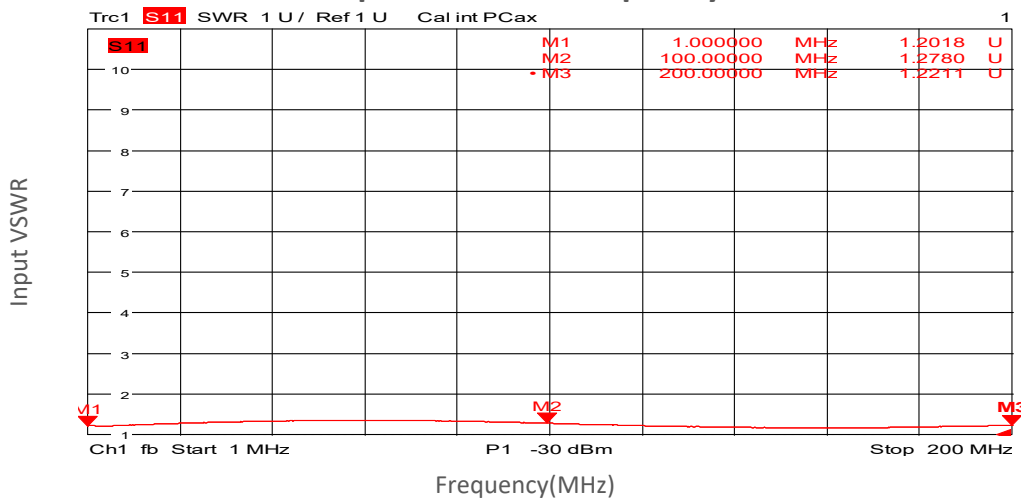
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

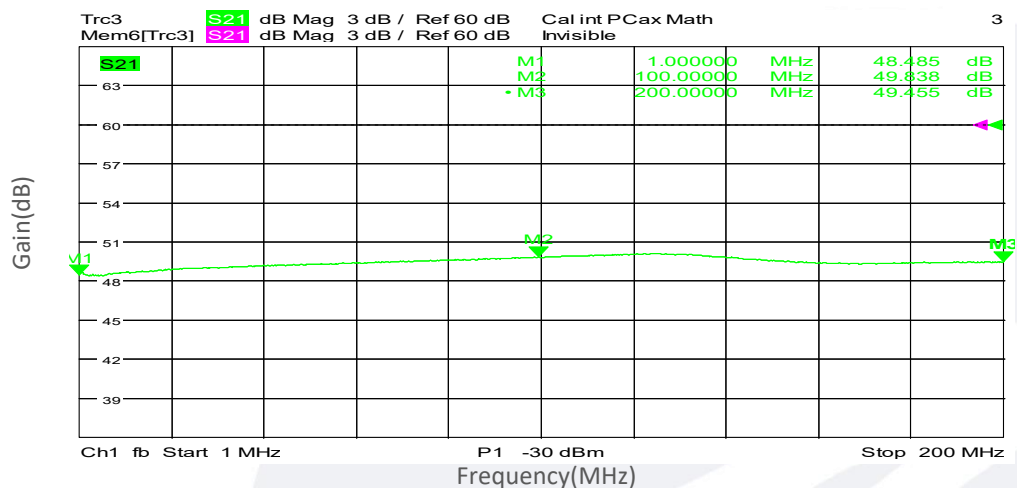
Base Number	Description	Revision
TLPA1M200M-45-45	Power amplifier 1-200MHz,Gain:45dB,Psat:45dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA1M200M-45-45-HS	Power amplifier 1-200MHz,Gain:45dB,Psat:45dBm, +28V DC,With Heatsink	Rev.1.1

Typical Performance Data:

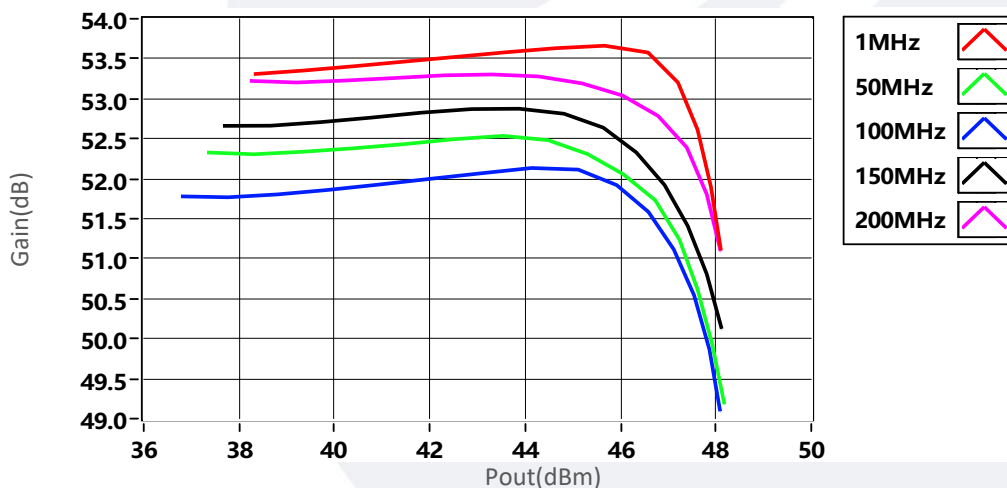
Input VSWR vs Frequency



Small Signal Gain vs Frequency



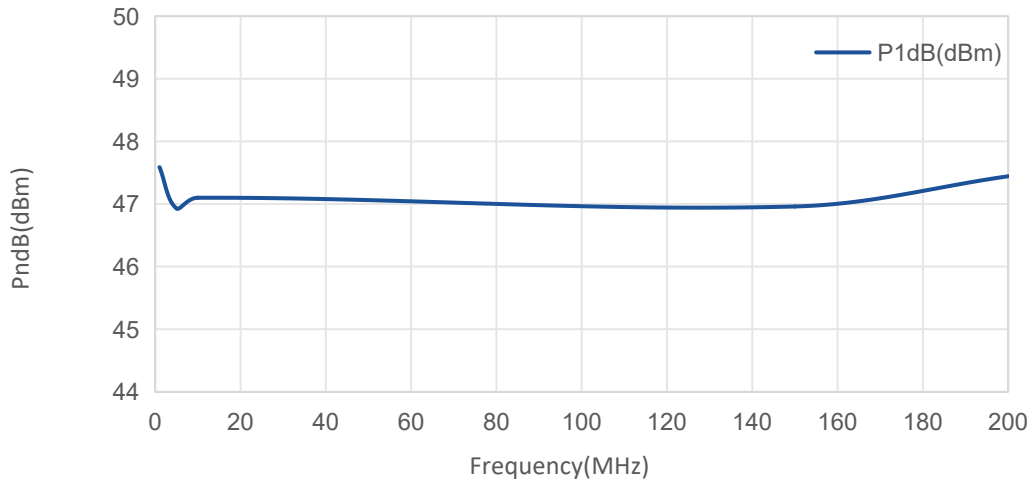
Gain vs Output Power



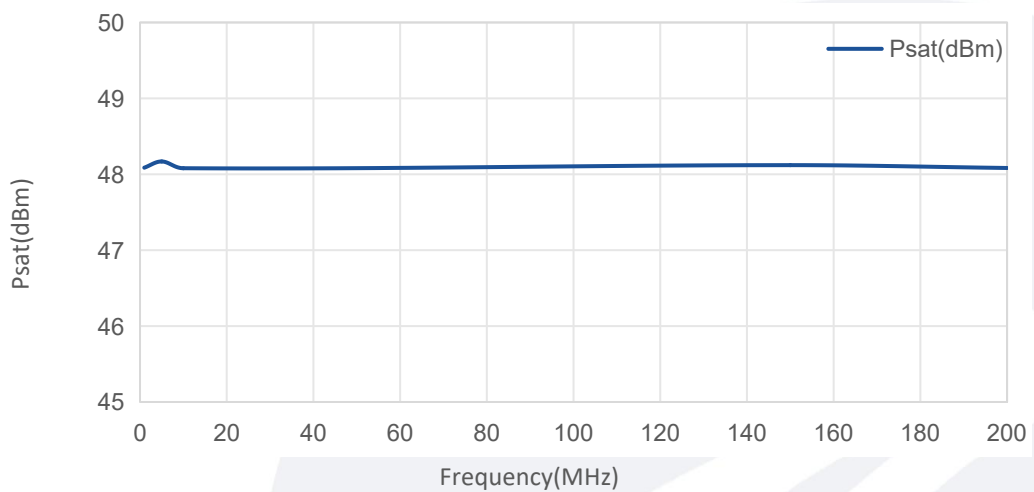
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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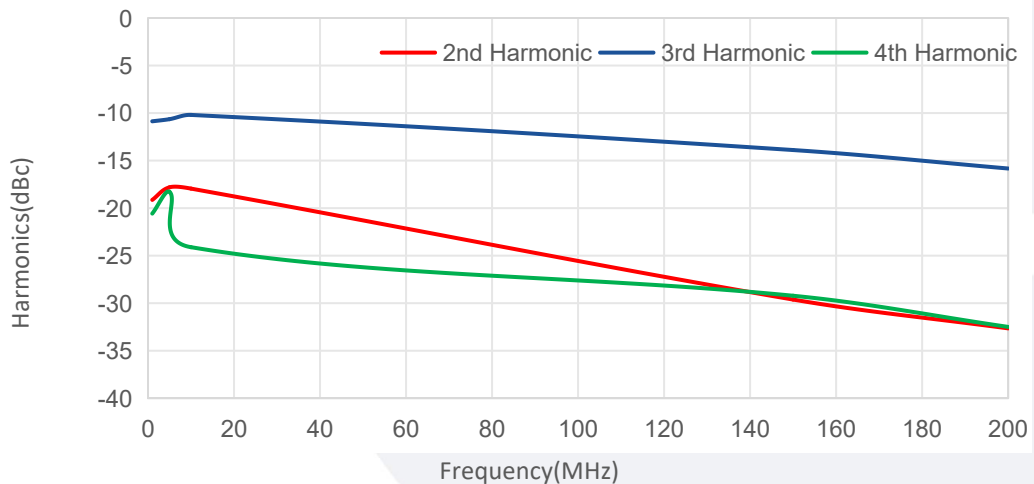
PndB vs Frequency



Psat vs Frequency



Harmonics vs Output Power



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